

What is claimed is:

1. An access point providing a wireless local area network connection to a terminal device, for the purpose of connecting the terminal
5 device to a wide area network, the access point comprising:

an antenna unit that sends and/or receives a radio frequency signal used for exchanging information via the wireless local area network;

a signal conversion unit that performs conversion between the radio frequency signal and a digital signal as the information;

10 an information processing unit that executes processing of the digital signal based on a communication protocol for exchanging of the information;

an antenna case that contains the antenna unit and the signal conversion unit;

15 a main unit case that, separated from the antenna case, contains the information processing unit; and

a wired cable that, connecting the antenna case and the main unit case, performs transmission the digital signal between the signal conversion unit and the information processing unit.

20 2. An access point according to claim 1, wherein the signal conversion unit comprises:

a frequency conversion unit that performs conversion between the radio frequency signal and an intermediate frequency signal having lower frequency than the radio frequency signal;

25 a modem unit that performs modulation and/or demodulation between the intermediate frequency signal and a base band signal; and

a base band unit that performs conversion between the base band signal and the digital signal.

3. An access point according to claim 1 or 2, wherein the
5 transmission of the digital signal by the wired cable is either one of serial transmission and parallel transmission.

4. An access point according to any of claims 1 to 3, wherein the
wired cable, in addition to transmission of the digital signal, performs at least
10 one of transmission of a control signal and power supply, for at least one of the antenna unit and the signal conversion unit.

5. An access point according to any of claims 1 to 4, wherein the
wired cable is coaxial cable.
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6. A method for exchanging signals at an access point providing a
wireless local area network connection to a terminal device, for the purpose of
connecting the terminal device to a wide area network, the method
comprising:

20 disposing an information processing unit in a main unit case, wherein
the information processing unit executes processing of a digital signal based
on a communication protocol used by the wireless local area network;

disposing a signal conversion unit in an antenna case separated from
the main unit case, wherein the signal conversion unit performs conversion
25 between the digital signal and a radio frequency signal which an antenna unit
sends and/or receives over the wireless local area network;

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connecting the main unit case and the antenna case via a wired cable;
and
transmitting the digital signal according to the protocol of the local
area network via the wired cable.